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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/334,238	06/16/99	LONGWELL	M JMS009-00

EXAMINER

WM31/0927

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ART UNIT	PAPER NUMBER
2133	3

DATE MAILED: 09/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/334,238	Longwell et al.
Examiner	**Art Unit**
Christine Tu	2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *three* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *May 16, 1999*

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-32* is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-9, 14, 15, and 19-32* is/are rejected.

7) ☒ Claim(s) *10-13 and 16-18* is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed. See Form 948 attached.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-9, 14-15 and 19-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki et al. (4,719,628 and Ozaki hereinafter).

Claims 1, 2 and 5:

Ozaki discloses the invention substantially as claimed. Ozaki shows an error correcting decoder for use in a memory arranged in two dimensions of (k_1 x k_2). The error correcting decoder comprises a C_1 decoder (12) and a C_2 decoder (16). In the C_1 decoder (12), the decoding of the C_1 code is performed. All errors up to $(n_1 - k_1)/2$ symbols are corrected in the C1 decoding. The C2 decoder (15) then decodes the C2 code. The C2 decoder (16) corrects errors of up to $(n_2 - k_2)/2$ symbols (figures 2 and 3, column 4 line 54-column 5 line 10).

Ozaki does not explicitly discloses the access circuit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to realize an access circuit would have been included in the error correcting decoder. The artisan would have been motivated to do so because Ozaki teaches that the reproduced data from the memory are supplied from an input terminal (column 4 lines 55-56).

Claim 3:

Ozaki shows an error correcting decoder for use in a memory arranged in two dimensions of (k_1 x k_2) (figure 2).

Claim 4:

Ozaki does not explicitly teaches that k_1 x k_2 are the same. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to realize k_1 and k_2 could be the same. The artisan would have been motivated to do so because having a memory of k_1 and k_2 being the same would not affect the error decoding performance.

Claim 6-9:

Claims (6 & 7), 8 and 9 are rejected for reasons similar to those set forth against claims (1 & 2), 3 and 4.

Claims 14 & 15 & 23:

Claims 14, 15 and 23 are rejected for reasons similar to those set forth against claims 1, 2 and 5.

Claims 19-22:

Ozaki teaches that the C1 decoder (12) decodes the C1 code and all errors of up to (n1-k1)/2 symbols are correct in the C1 decoding. Ozaki also teaches the C2 decoder (16) for decoding C2 and corrects errors of up to (n2-k2)/2 symbols in the C2 decoding (column 4 line 57-column 5 line 10).

Claims 24:

Ozaki discloses the invention substantially as claimed. Ozaki shows an error correcting decoder for use in a memory arranged in two dimensions of (k_1 x k_2). The error correcting decoder comprises a C_1 decoder (12) and a C_2 decoder (16). The C2 decoder (15) then decodes the C2 code. The C2 decoder (16) corrects errors of up to (n_2 - k_2)/2 symbols (figures 2 and 3, column 4 line 54-column 5 line 10).

Ozaki does not explicitly discloses the access circuit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to realize an access circuit would have been included in the error correcting decoder. The artisan

would have been motivated to do so because Ozaki teaches that the reproduced data from the memory are supplied from an input terminal (column 4 lines 55-56).

Claims 25-30:

In Ozaki's C_1 decoder (12), the decoding of the C_1 code is performed. All errors up to $(n_1 - k_1)/2$ symbols are corrected in the C1 decoding (column 4 lines 57-69).

Claims 31 and 32:

Ozaki discloses the invention substantially as claimed. Ozaki shows that an encoder and an error correcting decoder. The encoder comprises a C2 parity generator (2) for generating C2 parity data and a C1 parity generator (6) for generating C1 parity data. The error correcting decoder comprises a C_1 decoder (12) and a C_2 decoder (16). In the C_1 decoder (12), the decoding of the C_1 code is performed. All errors up to $(n_1 - k_1)/2$ symbols are corrected in the C1 decoding. The C2 decoder (15) then decodes the C2 code. The C2 decoder (16) corrects errors of up to $(n_2 - k_2)/2$ symbols (figures 1, 2 and 3, column 2 line 50-column 3 line 8, column 4 line 54-column 5 line 10).

Ozaki does not explicitly teach the error detection circuit. Ozaki, however, teaches a syndrome generating circuit (23) forms syndromes which are supplied to an error location and error value calculating circuit (24). The error data from the error

location and error value calculating circuit (24) is used for indication the location of errors (figures 4 and 5, column 6 line 40-column 7 line 14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to name the combination of syndrome generating circuit (23) and the error location and error value calculating circuit (24) as an "error detection circuit". The artisan would have been motivated to do so because giving a name of "error detection circuit" for the combination of syndrome generating circuit (23) and the error location and error value calculating circuit (24) would not affect the performance of detecting errors in the data.

4. Claims 10-13 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine T. L. Tu whose telephone number is (703) 305-9689. The examiner can normally be reached on Monday to Thursday from 8:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady, can be reached on (703) 305-9595.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 305-9724 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Christine T. L. Tu
Primary Patent Examiner
Art Unit 2133

September 25, 2001